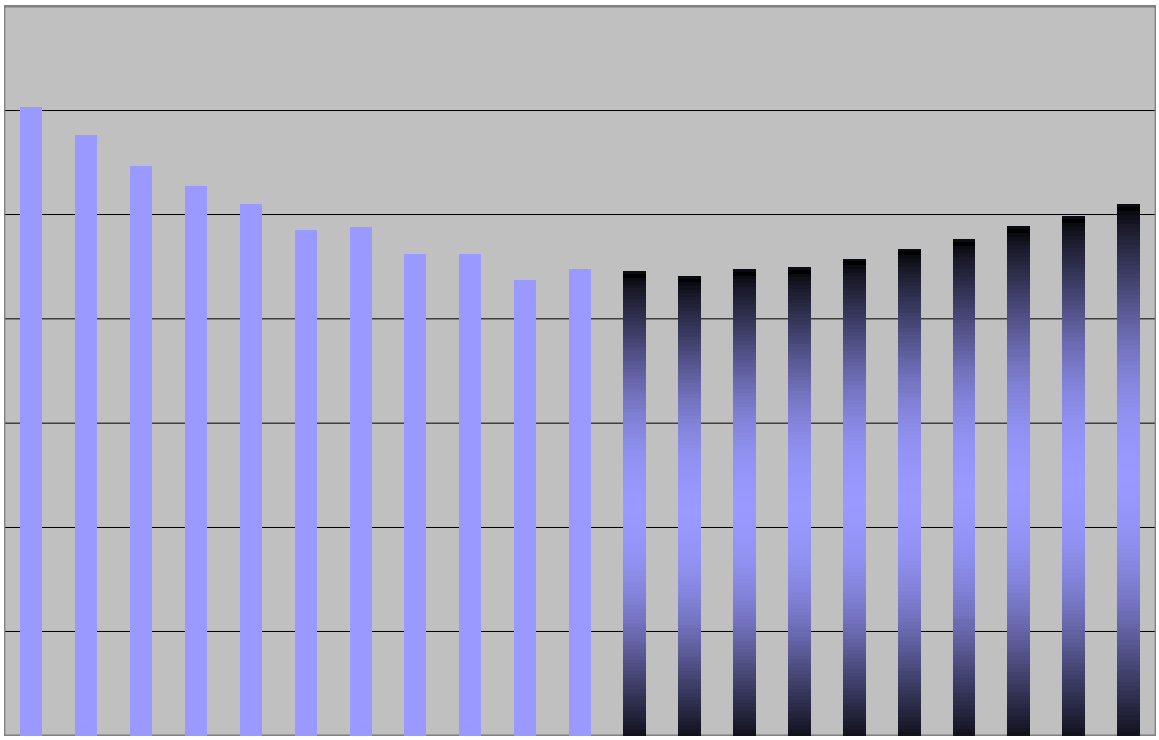
# COLCHESTER PUBLIC SCHOOLS ENROLLMENT PROJECTED TO 2031



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## Introduction

This report presents a ten-year projection of enrollment for the Colchester Public Schools. It is based on students enrolled in Colchester schools, a PK-2, 3-5, 6-8 and 9-12 grade alignment. The report includes 52 years of enrollment to place the projection into a wider historical perspective. One of the primary drivers of future enrollment is births to residents. The report examines births and their relationship to kindergarten enrollment. Several factors that influence school enrollment - town population, women of child-bearing age, employment, housing, high school dropouts, non-public enrollment, resident enrollment in other public schools, non-resident enrollment in Colchester schools and migration - are presented. Finally, the accuracy of earlier projections is examined.

Enrollment projections are a valuable planning tool. For budgeting, the numbers can place requested expenditures into a per pupil context. This can inform the public about which expenditures represent continuing expenditures to support on-going programs and expenditures for school improvement and program expansion. They are an essential step in determining the staffing that will be needed in the future. This may facilitate the transfer of teachers from one grade to another or allow the hiring process to start earlier, which can increase the likelihood of attracting the best teachers in the marketplace. Projections are a critical and required step in planning for school facilities. The State of Connecticut requires eight-year school-based projections as a critical component of determining the size of the project for which reimbursement is eligible. This report is appropriate for that purpose for all of your schools. In some communities the projection can determine the number of places they can make available to urban students as part of a regional desegregation effort.

This projection was run during the Covid-19 pandemic which has had an impact mostly on elementary enrollment. In projections I have run, I have observed a continued decline in non-public school enrollment, a decline in births in 2020, an increase in births in 2021, a slight decrease in magnet school enrollment, and more families deciding to home-school their children. Each town is a little different. The trick is to observe the data and make a judgement which patterns are transient and adjust the projection accordingly. A key assumption behind the method used in this report is that enrollment patterns in the near future will be reflected in the patterns of the recent past. I now believe that the pandemic will be substantially behind us in the fall of 2022. I have made what I feel are the best possible adjustments to this unique situation.

## Perspective

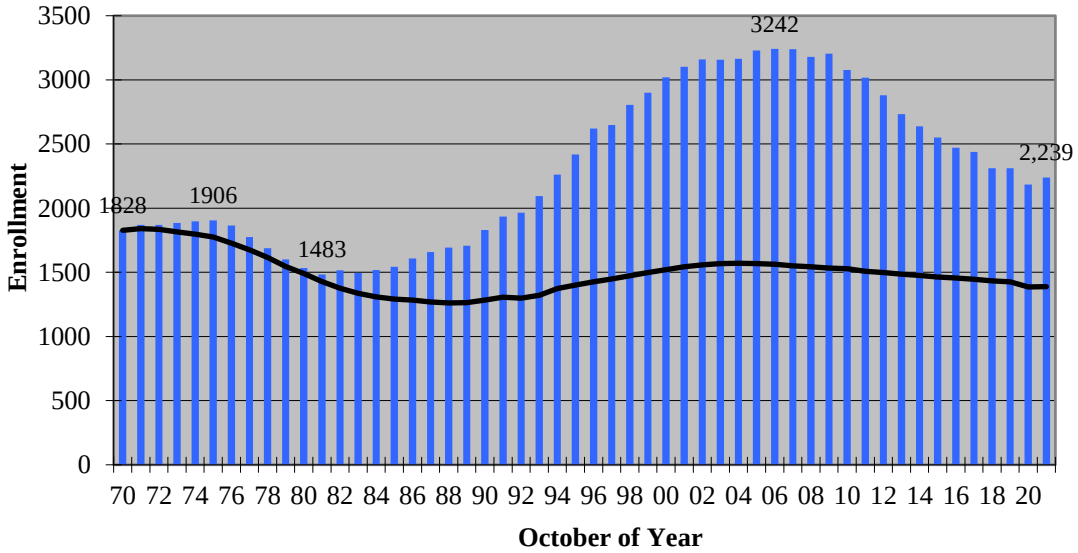
Enrollment projections typically use the most recent five years of data. While the most recent past is viewed as the best predictor of the near future, it is informative to look at a broader perspective. Figure 1 shows the enrollment in Colchester from 1970 to date.

Enrollment in the Colchester Public Schools grew from 1,828 students in 1970 to 1,906 students in 1975. Between then and 1981, enrollment went on a brief decline that took it to 1,483 students. In those six years, enrollment declined by 423 students or 22.2 percent. Between 1981 and 2006 enrollment increased by 1,759 students. The 3,242 students enrolled in 2006 was the all-time peak and represented a huge 119 percent increase over the 1981 low. Enrollment then entered a second downward cycle. Between 2006 and 2021 enrollment declined by 1,057 students or 30.9 percent. The 2021 enrollment of 2,239 students is similar to that of 1994.

Colchester's enrollment pattern is only roughly similar to that of the state's public schools. Between its 1971 peak and 1988, Connecticut public school enrollment declined by 31.5 percent. State enrollment hit a secondary peak in 2004. It grew 24.5 percent between the 1988 low and 2004. State enrollment declined by a projected 11.6 percent between 2004 and 2021. The 1970 to 1975 growth in Colchester was steeper that the state's. The subsequent enrollment decline in Colchester was much shorter in length than the state's and less deep. Colchester’s 1981 to 2006 growth period was much longer than the state’s and

very much greater in magnitude. Colchester's second cycle of decline has been shorter than the state's but more severe. Had Colchester followed the state pattern of enrollment, it would have had only 1,387 students enrolled in October of 2021 instead of your enrollment of 2,239.

**Figure 1. Colchester Enrollment 1970 to Date**



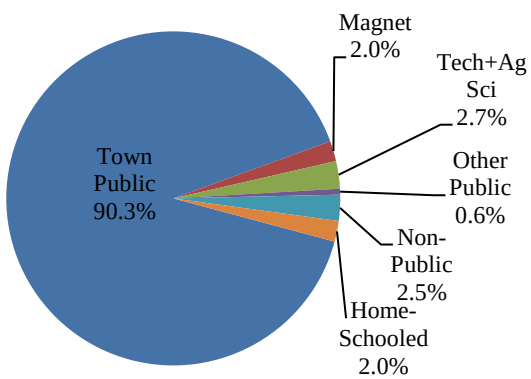

## Current Enrollment

Table 1 and Figure 2 provide a picture of where Colchester residents attended school on October 1, 2021. The data, provided by the Colchester Central Office, should be considered preliminary. The non-public data were projected. They show that 90.3 percent of Colchester's school-age residents attended the Colchester Public Schools in October of 2021. A projected 62 school-age residents (2.5 percent) attended non-public schools in state. The number attending private schools out-of-state is not known. This figure includes five students paid by the district to attend a non-public special education program.

**Table 1. 2021 Enrollment**

| | Number | Percent |
|---|---|---|
| **Residents** | | |
| A. Colchester Public | 2,208 | 90.3% |
| B. Magnet | 48 | 2.0% |
| C. Tech.+ Ag. Sci. | 65 | 2.7% |
| D. Other Public | 14 | 0.6% |
| E. Non-Public | *62* | 2.5% |
| F. Home-Schooled | 49 | 2.0% |
| **Total (A+B+C+D+E)** | 2,446 | |
| G. Non-Residents | 31 | |
| **Total Enrollment (A+G)** | 2,239 | |

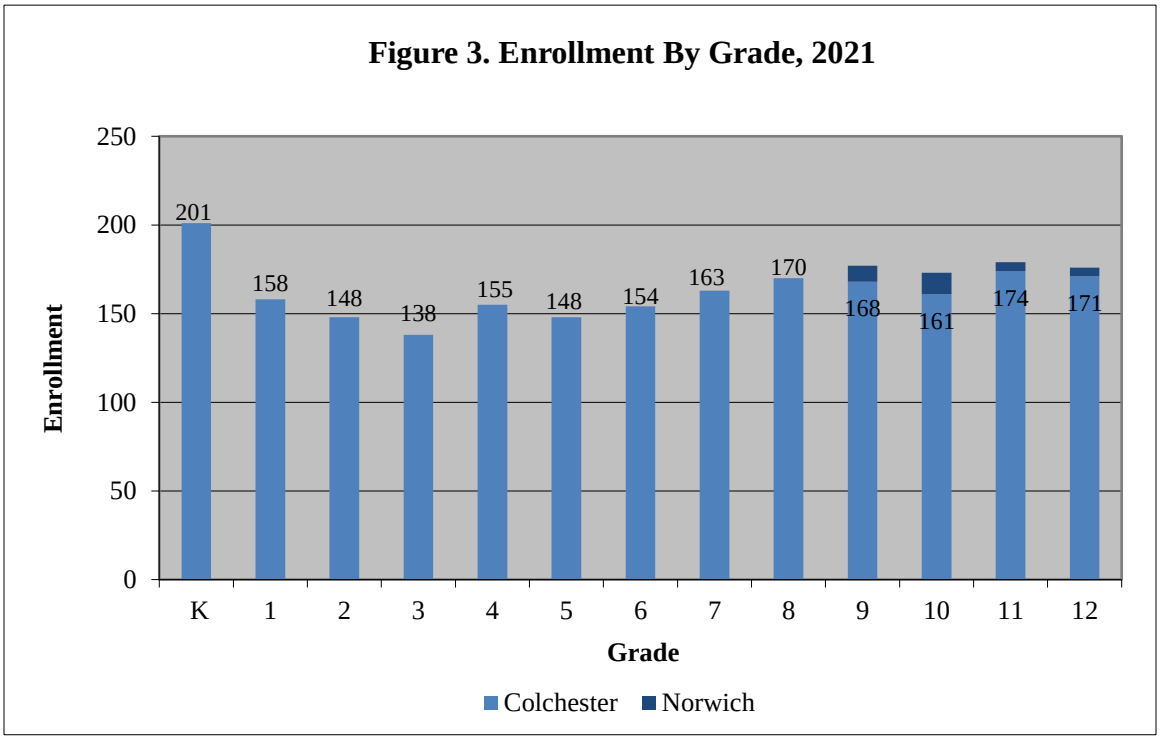
**Figure 2. Schools Attended by Town Residents, 2021**



Forty-eight school-age residents attended charter or magnet schools (2.0 percent). Sixty-five students (2.7 percent) attended a state technical high school or an agriculture science program. Fourteen students (0.6 percent) attended another public school, most in a special education program run by a Regional Service Center. There were 31 non-residents who attended Bacon Academy on a tuition basis in 2021. The projections in this report are based upon the 2,239 residents and non-residents who attend the Colchester Public Schools on October 1, 2021 (See "Total Enrollment" on the prior page).

Figure 3 shows the October 1, 2021 enrollment by grade of Colchester and Norwich students in the Colchester Public Schools. The children in pre-kindergarten programs are not shown. Kindergarten had the largest enrollment with 201 students. Grades 11 and 12 more than 170 Colchester residents enrolled. Grade 3 was the smallest class with only 138 students. Grades 2 and 5 were the only others to have less than 150 residents enrolled. If current conditions continue, this year's very large kindergarten class could have 216 students when it enters grade 3 at the Jack Jackter School in 2024, 218 students when it enters grade 6 at the William J. Johnson Middle School in 2027 and 213 resident students when it enters grade 9 at Bacon Academy in 2029. All projected enrollments are above the current enrollment in those grades. The current year enrollment by grade is the starting point for this projection. How it moves forward is discussed below.

**Figure 3. Enrollment By Grade, 2021**




## Projection Method

The projections in this report were generated primarily using the cohort survival method. This is the standard method used by people running enrollment projections. For the grades above kindergarten, I compute grade-to-grade growth rates for ten years (see Appendices A and B). For example, if the number of fourth graders this year is 143 and the number of third graders last year was 140, then the growth rate is 1.021. Growth rates above 1.000 indicate that students moved in; transferred from non-public schools, other public schools, or home-schooling; or were retained. Growth rates below 1.000 mean that students moved out, transferred to private or other public schools, left to be home-schooled, dropped out, or were not promoted from the prior grade. I adjusted the 2021 growth rates downward by including students home-schooled in 2020 and 2021. For each grade I calculated five different averages of the year-to-year growth rates: a three-year average; a weighted three-year average; a four-year average from 2017 to 2019

and 2021; a five-year average and a weighted five-year average. I choose the average that seems to best fit the data. The average growth rate for a grade is applied to the prior year's enrollment from the prior grade. The projection builds grade by grade and year by year.

The growth rates used in the projection in grades 1-8 were based on four-year averages of the observed grade-to-grade growth from 2017 to 2019 and adjusted 2021. This eliminated the negative impact of Covid-19 on enrollment in 2020.

In grades 9-12 I felt comfortable using five-year averages because Covid-19 had a lesser impact on older students. There were 31 dropouts reported in 2021. At least 19 were in grade 12. In the past five years the average was four. I made proportional adjustments to the 2021 grade-to-grade transition rates in grades 11 and 12 based on a proportional allocation of the difference between dropouts in 2021 and the previous five-year average. In grade 9, I adjusted the annual growth rates in 2015 to 2021 to reflect residents only. I then assumed 9 students (the average over the past five years) from Norwich would enroll in grade 9 in 2022 and annually thereafter. I projected enrollment using five-year averages of the grade-to-grade growth rates in grades 10-12 separately for Colchester and Norwich residents and then combined the results.

I broke kindergarten into five-year-olds, six-year-olds entering kindergarten for the first time and repeaters. For the projections in 2022-2024, I used the four-year averages (2017-2019, 2021) of each component. In the 2025-31 years of the projection, I used the slightly more conservative eight-year medians of the components because I felt it would be unlikely that Colchester could maintain the high rate of growth from birth to kindergarten. I projected pre-kindergarten enrollment from the four-year average (2016-2019, 2021) of the ratio of prekindergarten enrollment one year with the average of births three- and four-years ago.

The number of children home-schooled jumped from 15 in 2019 to 49 in 2021 and then retreated to 25 in 2021. I assumed that increase was due to parents' concerns about Covid-19. I assumed that the impact of Covid-19 would be substantially behind us by October, 2022. Accordingly, I assumed that 50 percent of the students home-schooled in 2021 would return to the Colchester Public Schools in 2022. That approach would return the number home-schooled to about 15 students in 2023.

To extend the projections beyond four years, I needed to estimate births for the years 2022 to 2026. The Connecticut State Department of Public Health recorded 135 births to Colchester residents in 2018 and provisional counts of 159 in 2019 and 138 in 2020. These rarely change. I estimated there would be 188 births in 2021 from the number of in-state births through September of 2021, expected number of in-state births from October to December based on the ratio of October to December births versus January to September births over the past five years and the average out-of-state births in 2018, 2019 and 2020. I used the Connecticut State Data Center's 2017 projections of women of child-bearing ages in 2020, 2025 and 2030 along with my estimate of the 2019 fertility rate for Colchester to estimate births in 2020, 2025 and 2030. I calculated annual growth rates for 2020 to 2025 and 2025 to 2030 and applied them to the moving three-year averages of births starting in 2019 to estimate births through 2026.

Enrollment data from 2011 to 2020 were taken from files provided by the Connecticut State Department of Education. Note that current district-level data on the Department's website may include special education students educated outside of the district and exclude students in a Detention Center. These are recent changes to the way the Department reports enrollment data. Projections require consistency. The data I have chosen for this analysis **exclude** special education students educated outside of the district and may **include** students in a Detention Center. Enrollment data can change daily until an audited final file is closed. This process can take up to two years. Thus, it is possible that the enrollment data in this report could differ slightly from data in earlier reports and that may have been reported by your Board of Education to the public. The Colchester central office provided enrollments in 2021. Births from 1980 to 2021 were provided by the Healthcare Quality, Statistics, Analysis and Reporting Unit of the State Department of Public Health.

## Total Enrollment

Table 2 and Figure 4 present the observed total enrollment in Colchester schools from 2011 to 2021 and projected enrollment through 2031. Detailed grade-by-grade data may be found in Appendices A and B. Total enrollment in Colchester fell from 3,017 students in 2011 to 2,185 students in in 2020 and then rebounded to 2,239 students in 2021. Enrollment plummeted by 778 students or 25.8 percent between 2011 and 2021. I project that public-school enrollment statewide will have declined 7.4 percent in that period.

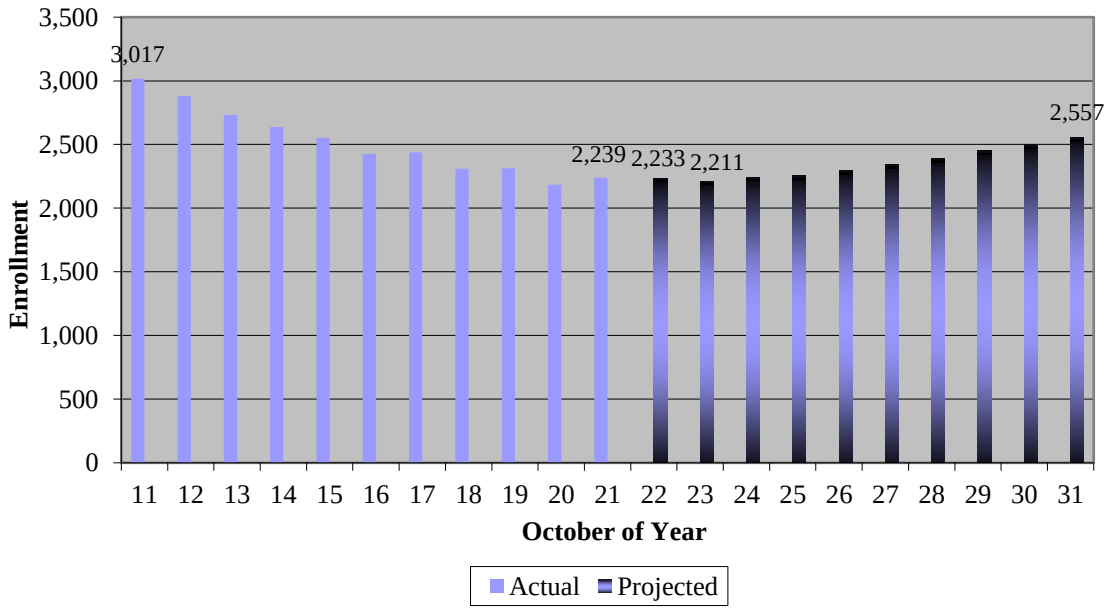
**Table 2. Total Enrollment**

| Year | Students | Percent Change |
|---|---|---|
| 2011 | 3,017 | |
| 2012 | 2,880 | -4.5% |
| 2013 | 2,733 | -5.1% |
| 2014 | 2,638 | -3.5% |
| 2015 | 2,551 | -3.3% |
| 2016 | 2,426 | -4.9% |
| 2017 | 2,438 | 0.5% |
| 2018 | 2,311 | -5.2% |
| 2019 | 2,312 | 0.0% |
| 2020 | 2,185 | -5.5% |
| 2021 | 2,239 | 2.5% |
| 2022 | 2,233 | -0.3% |
| 2023 | 2,211 | -1.0% |
| 2024 | 2,243 | 1.4% |
| 2025 | 2,253 | 0.4% |
| 2026 | 2,294 | 1.8% |
| 2027 | 2,342 | 2.1% |
| 2028 | 2,389 | 2.0% |
| 2029 | 2,450 | 2.6% |
| 2030 | 2,497 | 1.9% |
| 2031 | 2,557 | 2.4% |

Between 2010 and 2020, the latest data available, the enrollment loss of 29.0 percent in Colchester was in the second largest among similar (DRG D) towns in the area. Only the 31.8 percent loss in Old Saybrook was greater. Rocky Hill gained 2.2 percent. The losses in Cromwell (-2.1 percent), Wethersfield (-6.7 percent), East Hampton (-7.6 percent), Newington (-10.7 percent), Berlin (-13.8 percent), East Lyme (-14.8 percent), and Clinton (-23.3) were all smaller than Colchester's loss.

I project that the enrollment decline will continue through 2023 and then recover. Next year, I anticipate that total enrollment will decrease by 5-10 students. I anticipate that the enrollment low will come in 2023 at about 2,210 students. By the year 2031, enrollment could approach 2,560 students. That would be an increase of about 320 students (14.2 percent) from the October 2021 count and return enrollment to the count in 2015. In the state's public schools, I am projecting an 8.7 percent decline between 2021 and 2031. Total enrollment in Colchester could average close to 2,350 students over the ten-year projection period compared to an average total enrollment of 2,471 students over the past ten years.

**Figure 4. Total Enrollment**



## Colchester Elementary School Enrollment

Table 3 and Figure 5 present actual enrollment at the Colchester Elementary School in 2011 to 2021 and projected enrollment to 2031. Enrollment by grade may be found in Appendix A. Enrollment in grades PK-2 declined from 680 students in 2011 to 503 students in 2016 and then rebounded to 555 students in 2019. In 2020 it plunged to 498 and then rebounded strongly to 606 students in 2021. There were losses of ten percent or more in 2012, 2013, 2016 and 2020. There was a 21.7 growth in 2021 enrollment. The 10-year loss of 74 students represented 10.9 percent of the enrollment in 2011. I project that public-school enrollment statewide in grades K-2 will have declined 11.3 percent in that period.

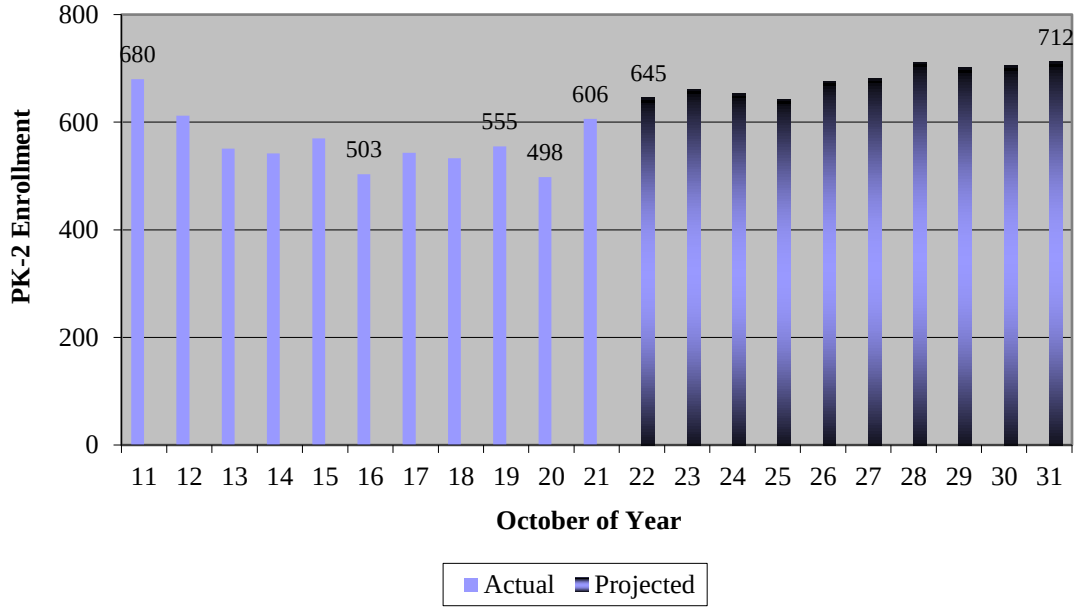
**Table 3. Colchester Elementary School Enrollment**

| Year | Students | Percent Change |
|---|---|---|
| 2011 | 680 | |
| 2012 | 612 | -10.0% |
| 2013 | 551 | -10.0% |
| 2014 | 542 | -1.6% |
| 2015 | 570 | 5.2% |
| 2016 | 503 | -11.8% |
| 2017 | 543 | 8.0% |
| 2018 | 533 | -1.8% |
| 2019 | 555 | 4.1% |
| 2020 | 498 | -10.3% |
| 2021 | 606 | 21.7% |
| 2022 | 645 | 6.4% |
| 2023 | 661 | 2.5% |
| 2024 | 653 | -1.2% |
| 2025 | 643 | -1.5% |
| 2026 | 676 | 5.1% |
| 2027 | 681 | 0.7% |
| 2028 | 711 | 4.4% |
| 2029 | 701 | -1.4% |
| 2030 | 705 | 0.6% |
| 2031 | 712 | 1.0% |

It appears that the decline in early elementary enrollment in Colchester is over. I project next year's enrollment in grades PK-2 could increase by almost 40 students, a 6.4 percent increase over this year. By 2031, PK-2 enrollment at the Colchester Elementary School could be close to 710 students. This would be similar to the number enrolled in 2010. This would be about 105 students more than 2021, a gain of between 17 and 18 percent. In grades K-2 in the state's public schools, I am projecting a 6.0 percent enrollment decline. Over the ten-year projection period, I believe enrollment in grades PK-2 could average about 680 students compared to the average of 551 students observed over the past ten years.

These figures include the children in your pre-kindergarten program. Program enrollment ranged from 53 children in 2016 to 104 children in 2019. There were 99 children enrolled in 2021. My projection model, based on births three- and four-years ago, projects pre-kindergarten enrollment could range from 96 to 113 students over the next ten years.

**Figure 5. Colchester Elementary School Enrollment**



## Jack Jackter School Enrollment

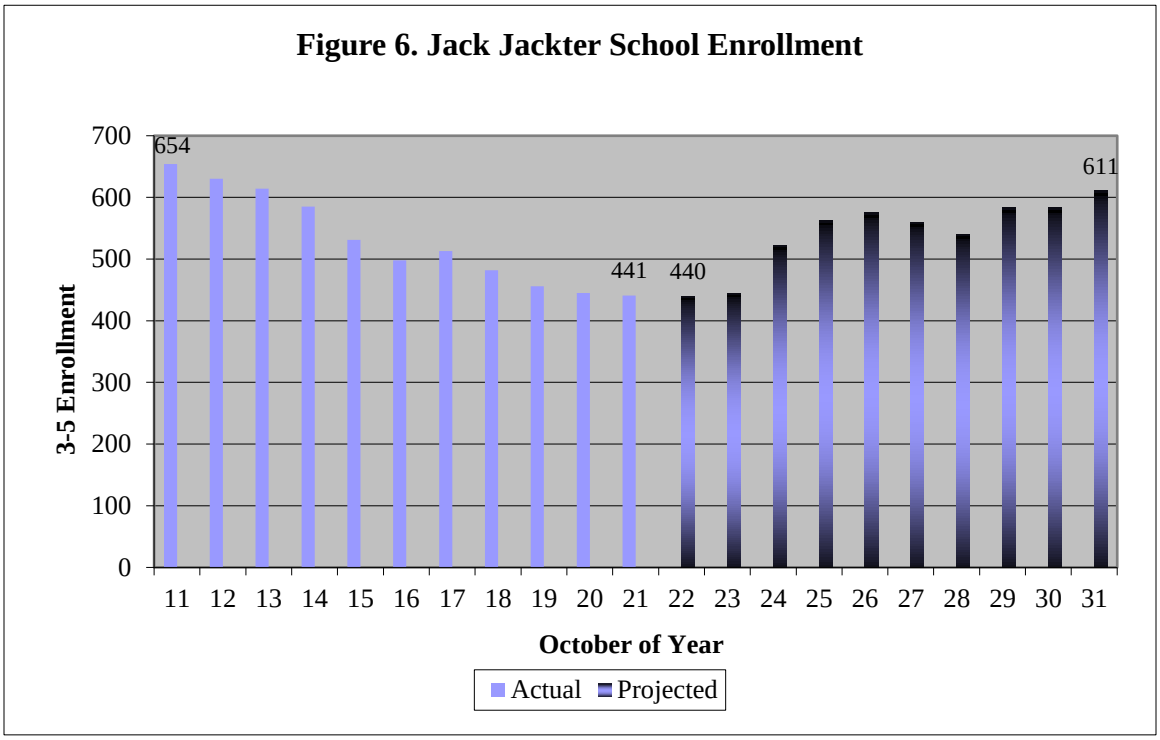
Table 4 and Figure 6 present actual enrollment at the Jack Jackter School from 2011 to 2021 and projected enrollment to 2031. Enrollment by grade may be found in Appendix A. Enrollment at the school fell irregularly from 654 students in 2011 to 441 students in 2021. There were declines of greater than five percent in 2015, 2016, 2018 and 2019. Between 2011 and 2021 enrollment declined by 213 students or 32.6 percent. I project that enrollment in grades 3-5 will have declined 9.7 percent in that period in the state's public schools.

I believe that future enrollment in grades 3-5 at the Jack Jackter School is close to the bottom. Next year's projected enrollment of 440 students could be the low. I expect enrollment could once again exceed 500 students in 2024 and exceed 600 students in 2031. That figure is based in part on an increase in future births. The projected 2031 enrollment of 611 students would be similar to the count in 2013. Over the ten-years from 2021 to 2031, I project a net increase of about 170 students or between 38 and 39 percent. Over the ten-year projection period, I believe enrollment in grades 3-5 could average about 540 students compared to the average of 520 students observed over the past ten years. In the state's public schools, I project that enrollment in grades 3-5 will decline by 11.6 percent between 2021 and 2031.

**Table 4. Jack Jackter School Enrollment**

| Year | Students | Change |
|---|---|---|
| 2011 | 654 | |
| 2012 | 630 | -3.7% |
| 2013 | 614 | -2.5% |
| 2014 | 585 | -4.7% |
| 2015 | 531 | -9.2% |
| 2016 | 498 | -6.2% |
| 2017 | 513 | 3.0% |
| 2018 | 482 | -6.0% |
| 2019 | 456 | -5.4% |
| 2020 | 445 | -2.4% |
| 2021 | 441 | -0.9% |
| 2022 | 440 | -0.2% |
| 2023 | 444 | 0.9% |
| 2024 | 522 | 17.6% |
| 2025 | 562 | 7.7% |
| 2026 | 575 | 2.3% |
| 2027 | 560 | -2.6% |
| 2028 | 540 | -3.6% |
| 2029 | 583 | 8.0% |
| 2030 | 583 | 0.0% |
| 2031 | 611 | 4.8% |

**Figure 6. Jack Jackter School Enrollment**



## William J. Johnson Middle School Enrollment

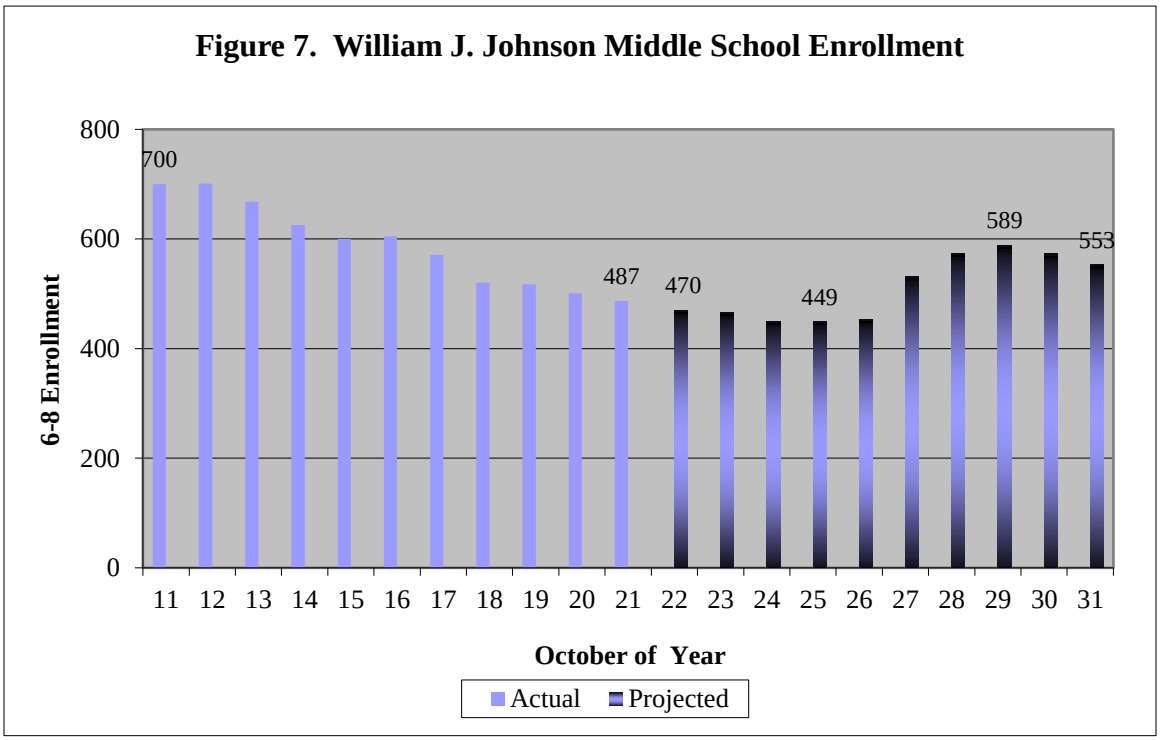
Table 5 and Figure 7 present actual enrollment in grades 6-8 in 2011 to 2021 and projected enrollment at the William J. Johnson Middle School to 2031. Enrollment by grade may be found in Appendix B. The school's enrollment fell from 700 students in 2011 to 487 in 2021. That was a loss of 213 students or 30.4 percent. The last time enrollment in these grades was near that level was 1993. There were losses of more than five percent in 2014, 2017 and 2018. I project that public-school enrollment in Connecticut will have fallen 6.3 percent in those grades in those 10 years.

I expect that enrollment at the William J. Johnson Middle School will drift irregularly downward for the next four years and then recover. All the students who will attend these grades over the next ten years school have already been born. Next year I anticipate that enrollment in grades 6-8 will decline by 15-20 students. I expect the enrollment low will come somewhere between 2024 and 2026 at about 450 students. Pushed, in part, by a huge increase in 2027, I believe enrollment could be close to 550 students at the projection's end. Over the ten-years, I project a 13-14 percent-gain. Over the ten-year projection period, I believe enrollment in grades 6-8 at the Middle School could average about 510 students compared to the average of 580 students in grades 6-8 observed over the past ten years. In the state's public schools, I project that enrollment in grades 6-8 will decline by 11.0 percent in the next ten years.

**Table 5. William J. Johnson Middle School Enrollment**

| Year | Grades 6-8 | Change |
|---|---|---|
| 2011 | 700 | |
| 2012 | 701 | 0.1% |
| 2013 | 668 | -4.7% |
| 2014 | 625 | -6.4% |
| 2015 | 600 | -4.0% |
| 2016 | 605 | 0.8% |
| 2017 | 571 | -5.6% |
| 2018 | 520 | -8.9% |
| 2019 | 517 | -0.6% |
| 2020 | 501 | -3.1% |
| 2021 | 487 | -2.8% |
| 2022 | 470 | -3.5% |
| 2023 | 466 | -0.9% |
| 2024 | 450 | -3.4% |
| 2025 | 449 | -0.2% |
| 2026 | 453 | 0.9% |
| 2027 | 532 | 17.4% |
| 2028 | 574 | 7.9% |
| 2029 | 589 | 2.6% |
| 2030 | 573 | -2.7% |
| 2031 | 553 | -3.5% |

**Figure 7. William J. Johnson Middle School Enrollment**



## Bacon Academy Enrollment

Grade 9 is the first opportunity to attend state technical high schools and agriculture science and technology centers. Preliminary October 2021 data show that 84.3 percent of Colchester residents enrolled in grade 9 were enrolled in the district. I project seven students (3.7 percent) will have enrolled in non-public schools in state. Seventeen 9th graders (8.5 percent) were enrolled in a technical high school or an agriculture science program. There were four 9th grade students (2.0 percent) enrolled in an area magnet school and two (1.0 percent) in another public school. There was also one student home-schooled (0.5 percent).

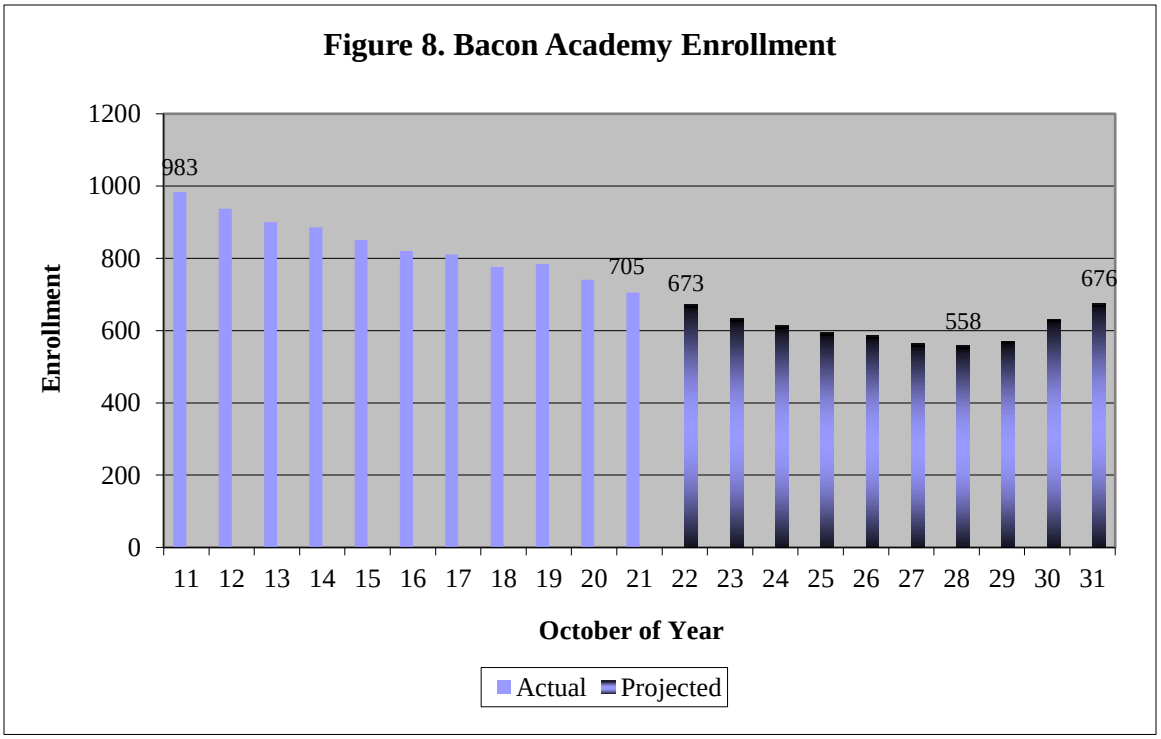
Table 6 and Figure 8 present enrollment at the Bacon Academy. Grade-by-grade enrollment may be found in Appendix B. Enrollment fell from 983 students in 2011 to 705 students in 2021. This decline came after a 25-year period of enrollment growth that ended in 2009. Between 2011 and 2021, grade 9-12 enrollment decreased by 278 students or 28.3 percent. I project that statewide public-school enrollment in grades 9-12 will have fallen 5.9 percent in that ten-year period.

**Table 6. Bacon Academy Enrollment**

| Year | Students | Percent Change |
|---|---|---|
| 2011 | 983 | |
| 2012 | 937 | -4.7% |
| 2013 | 900 | -3.9% |
| 2014 | 886 | -1.6% |
| 2015 | 850 | -4.1% |
| 2016 | 820 | -3.5% |
| 2017 | 811 | -1.1% |
| 2018 | 776 | -4.3% |
| 2019 | 784 | 1.0% |
| 2020 | 741 | -5.5% |
| 2021 | 705 | -4.9% |
| 2022 | 678 | -3.8% |
| 2023 | 640 | -5.6% |
| 2024 | 618 | -3.4% |
| 2025 | 599 | -3.1% |
| 2026 | 590 | -1.5% |
| 2027 | 569 | -3.6% |
| 2028 | 564 | -0.9% |
| 2029 | 577 | 2.3% |
| 2030 | 636 | 10.2% |
| 2031 | 681 | 7.1% |

I expect that next year's enrollment at Bacon Academy will be 25 students less than this year. I expect enrollment will fall below 600 students in 2025. I anticipate an enrollment low of about 565 students in 2028 before a rebound to about 680 students at the projection's end. The 2031 count would be about 25 students, between three and four percent, below the October 2021 count. Statewide, I have projected an 8.7 percent decline in public school grade 9-12 enrollment between 2021 and 2031. I believe enrollment at the high school could average 615 students over the next ten years compared to the average of 821 students observed over the past ten years.

**Figure 8. Bacon Academy Enrollment**



## Factors Affecting the Projection

The primary reasons for elementary enrollment change lie in the births, the yield from the birth cohort and grade-to-grade migration. Figure 9 presents the actual and provisional births from 1980 to 2019, and estimated births from 2020 to 2026. Births ranged from a high of 245 in 1990 to a low of 111 in 2013. There were 135 births recorded in 2018. That is the latest official count. The provisional counts are 159 births in 2019 and 138 births in 2020. From in-state births through June, I estimate there will be 167 births in calendar year 2021. From 2000 to 2009, there was an average of 186 births annually. In the five years from 2012 to 2016, this fall's kindergarten through 4th graders, births averaged 134. Births in the 2017 through 2021 period will average close to 149. The projection in years 2026 to 2031 assumes an average of 159 births annually between 2022 and 2026. This was based on the Connecticut State Data Center's 2017 projection of Colchester women of child-bearing ages and my estimate of 2019 fertility in Colchester.

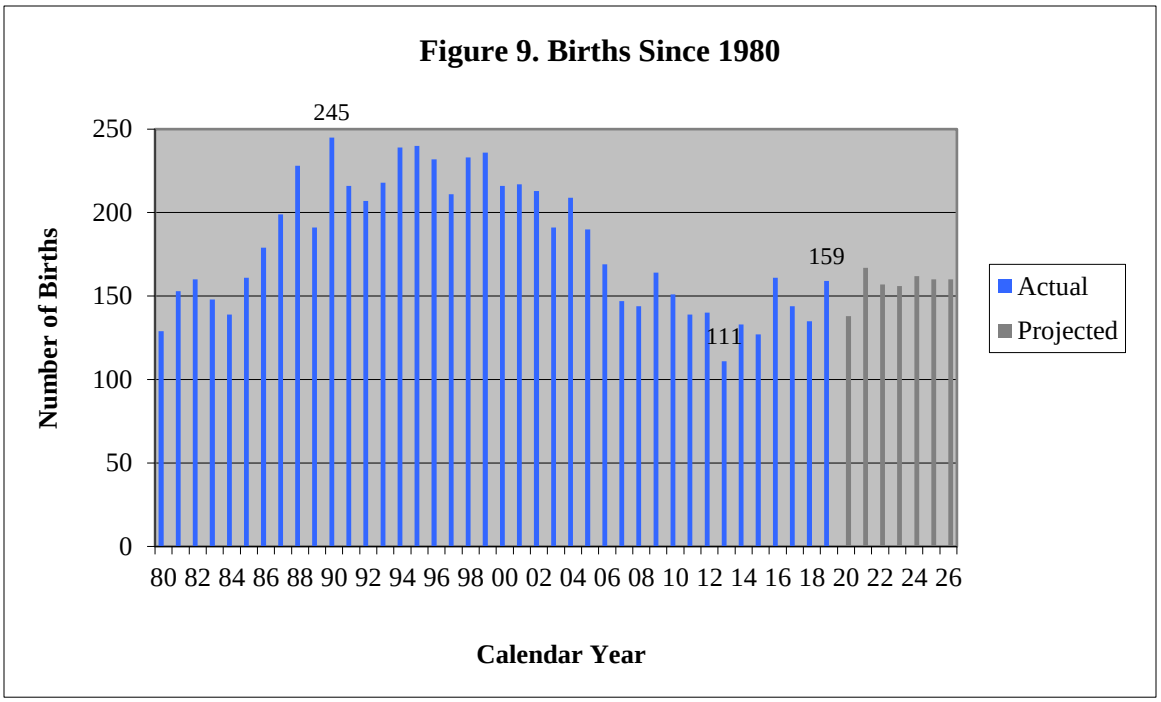
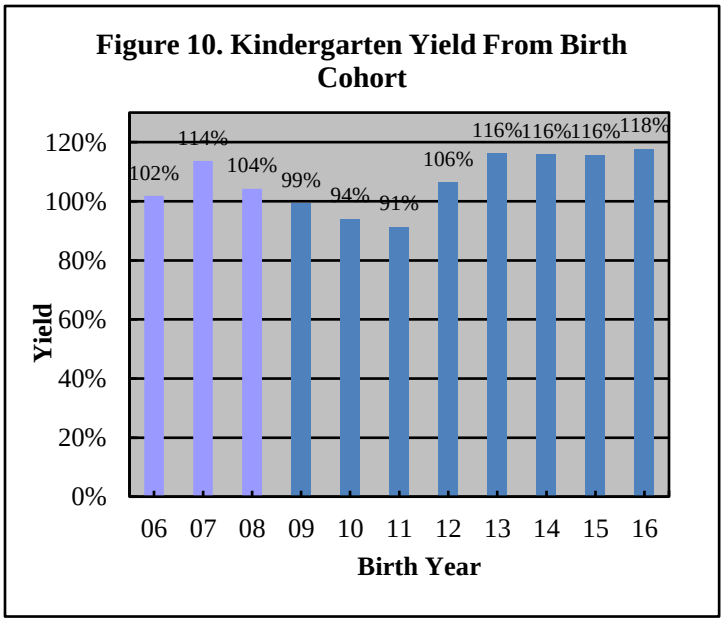



Figure 10 depicts the kindergarten yield five and six years after the birth year from 2006 to 2016 for Colchester residents attending kindergarten in the Colchester Public Schools. The dark blue indicates the birth cohorts affected by full-day kindergarten, which started in 2013. There were 127 births in 2015 and 122 children enrolled in Colchester kindergarten at age five in 2020 and an additional 25 who first enrolled in kindergarten at age six in 2021. That was a yield of 116 percent. The yield from the birth cohort ranged from a low 91 percent in 2011 to a high of 116 percent in 2013, 2014 and 2015. The estimated yield in 2016 was 118 percent. That yield is an estimate because we will not know



the number of students that will first enter as six-year-olds until October, 2022. Yields above 100 percent generally mean that parents who give birth elsewhere move into town before their child enters kindergarten. In the four-year look-back period of the projection, the yield was 114 percent; the median since full-day kindergarten started was 111 percent.

Table 7 gives a history of enrollment in kindergarten since 2011 and relates the components of kindergarten enrollment back to the appropriate birth cohort. Retention is tied to the prior year's kindergarten enrollment. I estimated kindergarten enrollment in 2022 to 2024 using the average from 2017-2019 and 2021 growth of retentions, and yields from births five and six years ago. In those years I estimated kindergarten from 101.5 percent of births five years ago, 13.3 percent of births six years ago, and 4.1 percent of current kindergarten students retained. I felt that was aggressive growth to maintain for 10 years, so for the projection years 2025 to 2031, I used the median of the components for the eight years full-day kindergarten has been in effect. In those years I estimated kindergarten from 95.9 percent of births five years ago, 12.0 percent of births six years ago, and 3.3 percent of current kindergarten students retained.

**Table 7. Analysis of Kindergarten Enrollment**

| Year | Birth Year | Births | K | Retained From Prior Year | - - - - Non-Retained - - - - Born 5-Years Prior Colchester Resident | Non-Resident | Born 6 Years Prior | Percent Retained | Yield From Births 5-Years Prior | Yield From Births 6-Years Prior | Total Yield From Birth Cohort |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2011** | 2006 | 169 | 180 | 6 | 155 | 0 | 19 | 3.0% | 91.7% | 10.0% | 101.8% |
| **2012** | 2007 | 147 | 170 | 5 | 148 | 0 | 17 | 2.8% | 100.7% | 10.1% | 113.6% |
| **2013** | 2008 | 144 | 158 | 6 | 133 | 0 | 19 | 3.5% | 92.4% | 12.9% | 104.2% |
| **2014** | 2009 | 164 | 162 | 2 | 143 | 0 | 17 | 1.3% | 87.2% | 11.8% | 99.4% |
| **2015** | 2010 | 151 | 147 | 1 | 125 | 0 | 20 | 0.6% | 82.8% | 12.2% | 94.0% |
| **2016** | 2011 | 139 | 138 | 8 | 113 | 0 | 17 | 5.4% | 81.3% | 11.3% | 91.4% |
| **2017** | 2012 | 140 | 155 | 7 | 134 | 0 | 14 | 5.1% | 95.7% | 10.1% | 106.4% |
| **2018** | 2013 | 111 | 127 | 2 | 114 | 0 | 15 | 1.3% | 102.7% | 10.7% | 116.2% |
| **2019** | 2014 | 133 | 158 | 6 | 137 | 0 | 15 | 4.7% | 103.0% | 13.5% | 115.8% |
| **2020** | 2015 | 127 | 142 | 3 | 122 | 0 | 17 | 1.9% | 96.1% | 12.8% | 115.7% |
| **2021** | 2016 | 161 | 201 | 8 | 168 | 0 | 25 | 5.6% | 104.3% | 19.7% | *117.7%* |
| **3-Year Average** | | | | | | | | 4.0% | 101.4% | 15.4% | 116.4% |
| **Weighted 3-Year Average** | | | | | | | | 4.2% | 101.4% | 16.4% | 116.7% |
| **5-Year Average** | | | | | | | | 3.6% | 100.4% | 13.2% | 114.4% |
| **Weighted 5-Yr Average** | | | | | | | | 3.8% | 101.1% | 14.8% | 115.8% |
| **2016-2019, 2021** | | | | | | | | **4.1%** | **101.5%** | **13.3%** | **114.0%** |
| **8-Year Median** | | | | | | | | **3.3%** | **95.9%** | **12.0%** | **111.1%** |

The correlation between births and kindergarten enrollment five-year later was a high 0.93 over the 2000 to 2021 period. If this relationship were used to predict kindergarten enrollment, the estimate would have been off by an average of 10 children annually over the past ten years. The cohort survival method, even with my breakout into five-year olds, six-year old delayed entrants and children retained, cannot overcome the underlying unpredictability of kindergarten enrollment from earlier births.

In the four-year look-back period of the kindergarten projection, births ranged from 111 to 161. Future kindergarten classes will be based on 135-188 births. That is somewhat above the range in the look-back period. We have to trust that the growth rate from birth to kindergarten will not change when births increase. If it does, future kindergarten enrollment could be over-estimated.

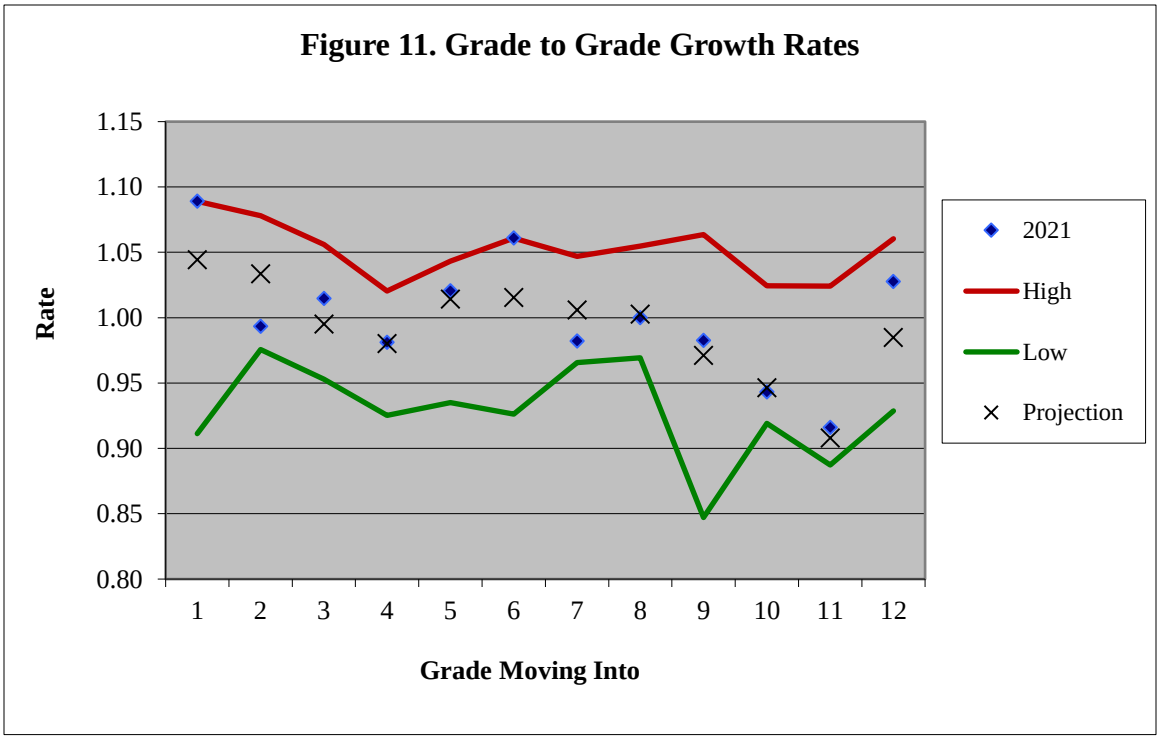
The "Connecticut Early Childhood Report on Changing the Kindergarten Date," mandated by Public Act 14-39, recommended that the start date for kindergarten be moved back to October 1st phased in one

month increments over the course of three years. It further recommended the elimination of the section of C.G.S Sec. 10-184 which allows parents the option of not enrolling their age-eligible child. Funds for the implementation have not yet been made available by the General Assembly. Unless the state's fiscal situation changes for the better or a court intervenes, I do not believe this common-sense change will be implemented. Once implemented, the changes will very slightly decrease the size of your kindergarten class for three years and increase your pre-kindergarten enrollment. This change is not built into this projection, but will be built into future projections once the implementation date is set.

Figure 11 gives a perspective of the grade-to-grade growth rates for resident students attending the Colchester schools. An "x" indicates the average growth rate used in the projection. The diamond is the growth observed between last year and this year. The upper line indicates the largest growth rate observed over the past ten years and the lower line, the lowest. For example, in grade 2 the projection used a growth multiplier of 1.034 over the prior year's 1st grade enrollment. Over the past ten years, the rate ranged from a low of 0.976 to a high of 1.078. In general, the narrower the gap between the two lines is, the greater the accuracy of the projection. The K-8 growth rates used in the projection were based on the averages of the observed grade-to-grade growth from 2017-2019 and 2021 (adjusted for students home-schooled); the high school growth rates were based on five-year averages with 2020 and 2021 adjusted for students home-schooled and the grade 11 and 12 averages in 2021 adjusted for the unprecedented increase in dropouts observed that year.

Most model growth rates were in the middle to the upper end of the ten-year range. Grades 10-12 were the exceptions. Most model growth rates were close to the 2021 rates. The 2021 rates were well above the projection growth rates in grades 1 and 6 and well below in grades 2 and 12. The 2021 rates set ten-year highs in grades 1 and 6. Six of the eight elementary growth rates are above 1.000, indicating that more families with children are moving into Colchester than leaving. The low rate in grade 9 reflects other opportunities such as technical high schools and agriculture science programs. The model growth rates in grades 2-12 averaged 0.987. The comparable rate for 2021 was 0.993. The 20-year median of those annual grade-to-grade rates was also 0.993

**Figure 11. Grade to Grade Growth Rates**



## Context of the Projection

The cohort-survival method typically needs only births and a few years of recent enrollment data to generate a projection. Mathematically, nothing else matters. But enrollment changes do not occur in a vacuum. Events and policies in the district, community and region all have some bearing on enrollment. Remember that a basic assumption of the cohort-survival method is that the recent past can be a good predictor of the near future. It is incumbent for every receiver of a projection to determine what events happened in the past few years and whether they are likely to change.

To assist in this endeavor, this report examines several factors that could affect enrollment: town population; women of child-bearing age; the labor force; new home construction; sales of existing homes; high school dropout rate; non-public enrollment; non-resident enrollment in Colchester schools; resident enrollment in other public schools and student migration.

Figure 12 presents the US Census Bureau's census growth for Colchester between 2010 and 2020. In that period, the population declined by 513 people. Colchester's population loss of 3.19 percent ranked it 119th in the state. In contrast, New London County fell by 2.01 percent, the state grew by 0.89percent and communities with similar economic and need characteristics (DRG D) grew by 0.69 percent. The actual population decline was greater than the inter-census estimates, which had Colchester's population falling by 1.5 percent.

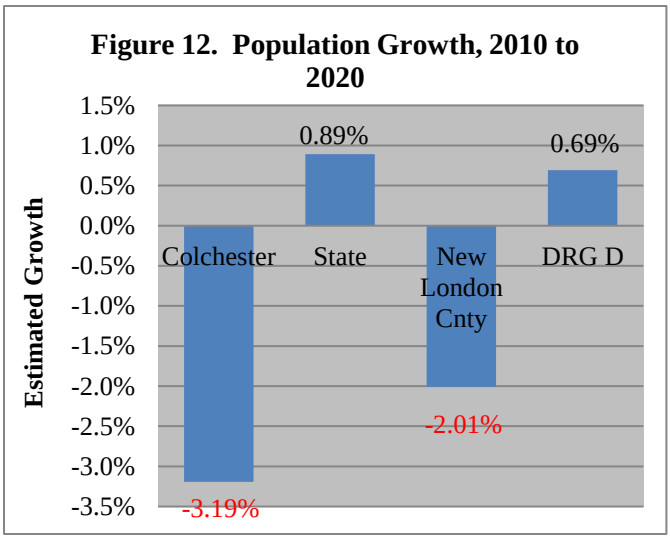



Figure 13 presents the Connecticut State Data Center's 2017 population projections for Colchester residents 0-19 years of age in the years 2020, 2025 and 2030. They projected that the population ages 0-4 would increase 15.6 percent between 2020 and 2030. They also projected the population ages 5-9 would fall from 824 in 2020 to 790 (-4.1 percent) in 2030 and then rebound to 864 in 2030. They projected that number of children ages 10-14 would decline sharply from 1,011 in 2020 to 840 (-16.9 percent) in 2030. The number of youth ages 15-19 was projected to decline from 1,136 in 2020 to 804 in 2030 (-29.2 percent). This independent projection forecasts a steeper decline than the projection in this report.

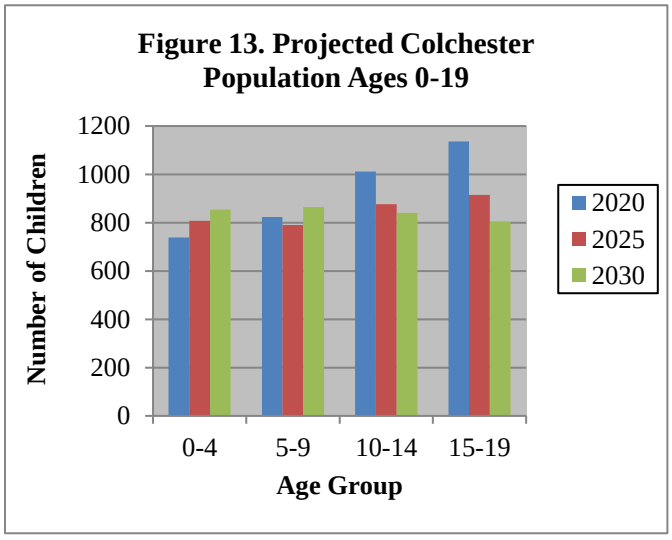


Figure 14 presents the Connecticut State Data Center's 2017 projections of the number of women of child-bearing age in Colchester from 2015 to 2025. The Center projected a 3.6 percent decline in the number of Colchester women ages 15-44 between 2021 and 2025. However, in communities like yours, 30-34-year-old women have the highest rate of births. The Center projected that the number of women in that group would grow from 443 in 2021 to 464 (+9.2 percent) in 2025. The second highest birth rate in communities like Colchester is women ages 25-29. The Center projected that the number in that age range would grow from 434 in 2021 to 464 (+6.9 percent) in 2021.

**Figure 14. Colchester Women of Child-Bearing Age**

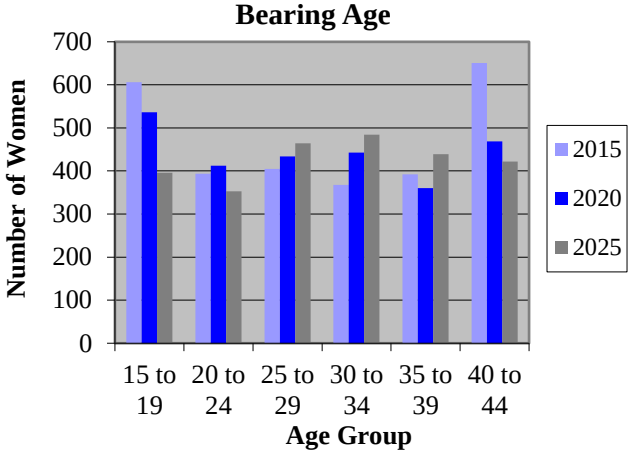



Figure 15 examines the number of people in the labor market from the US Department of Labor, Bureau of Labor Statistics. These are people 16 years of age or older who were working or actively were seeking employment. The Colchester labor force decreased between 2011 and 2013 and then rebounded through 2019. Covid-19 dropped the labor force to below the 2010 count in 2020. Between 2010 and 2020, the net decrease was 2.3 percent. This was worse than the state (-2.0 percent) but better than New London County (-8.2 percent). Colchester's unemployment rate jumped from 3.0 percent in 2019 to 6.2 percent in 2020. The 2020 rate was still down 2.1 percentage points from the 2010 high. It is better than the state rate of 7.9 percent and the New London County rate of 9.6 percent. The July 2021 rate improved to 5.2 percent.

**Figure 15. Recent Changes in the Labor Force**

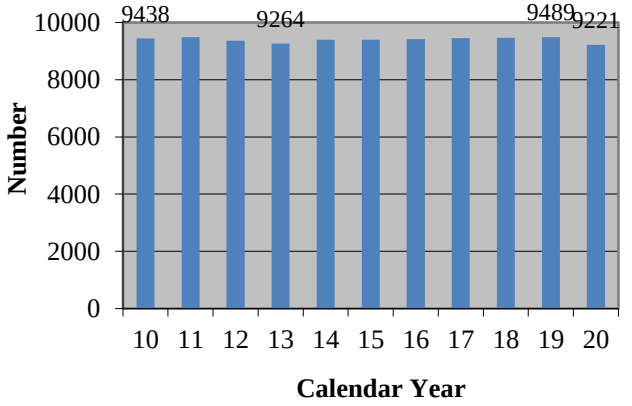



Figure 16 presents the net new housing permits issued from 2010 to 2020 from the State Department of Economic and Community Development. In the past ten years the number of net (of demolitions) new housing permits issued in Colchester ranged from a low of 10 in 2014 to a high of 35 in 2010. There were 17 permits issued in 2020. In the 2017-2020 period for this projection, there was an average of 12 net new housing permits issued.

**Figure 16. Net New Housing Units**

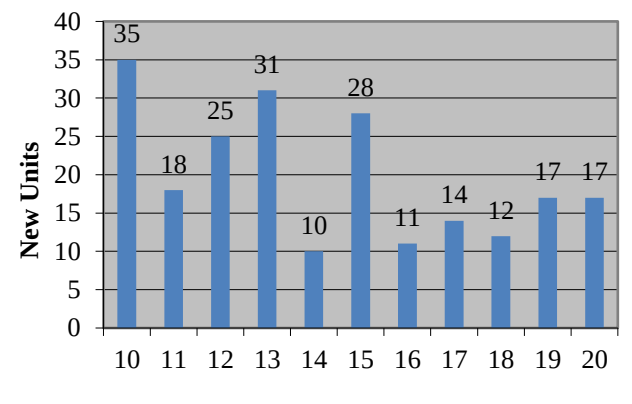


Figure 17 presents my estimate of the number of sales of existing single-family homes and condominiums. I derived it by taking the number of real estate transactions from The Warren Group/Commercial Record and subtracting the number of new single-family housing units authorized the prior year. The estimated number of sales of existing homes ranged from a low of 80 in 2011 to a high of 214 in 2020. In the 2017-2020 period, there was an average of 198 sales annually. Sales through August, 2021 are above those of the prior year.

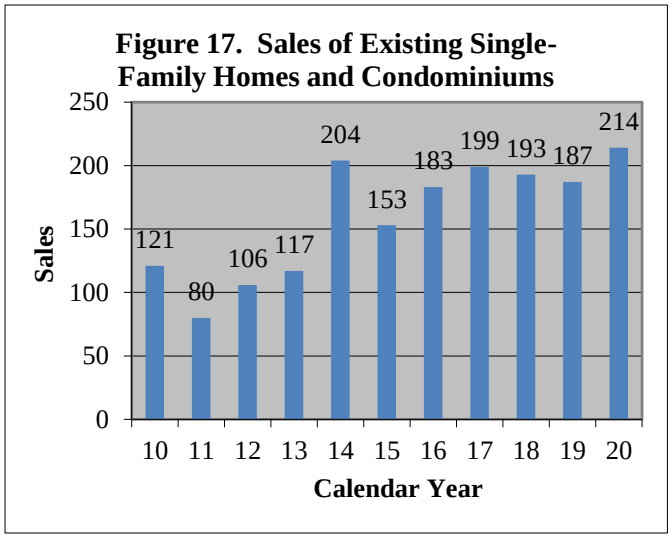



Figure 18 shows the annual percentage of dropouts from grades 9-12 for the 2010-11 to 2020-21 school years. The data were provided by the Connecticut State Department of Education and the Colchester central office. Dropouts are students who left school early, left to enroll in a GED program, transfer to post-secondary education prior to graduation or moved but not known to be continuing. The high school dropout rate exploded in 2021. That was due in part to students failure to maintain an on-line presence. Between July 1, 2020 and June 30, 2021, 31 students dropped out. In the 15 years before that, the largest number was nine. Over the four years between 2016 and 2019, the average rate was 0.4 percent. The 2021 rate was students who stopped attending on-line instruction and had not logged in by October 1, 2021.

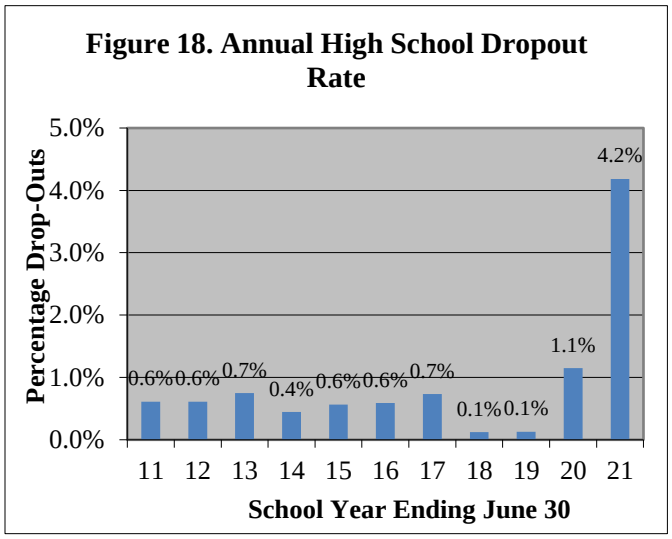



Figure 19 presents the non-public enrollment over the past ten years for students from the town of Colchester. The data are from the records of the Connecticut State Department of Education. Non-public enrollment declined from 161students in 2010 to only 65 students in 2020, the latest data available. In the past ten years, enrollment in the non-public schools declined by 96 students or almost 60 percent. The 2020 non-public enrollment represented 2.8 percent of all students from Colchester. Ten years ago, the figure was 4.8 percent. I project that non-public enrollment from Colchester will be about 60 students in 2021.

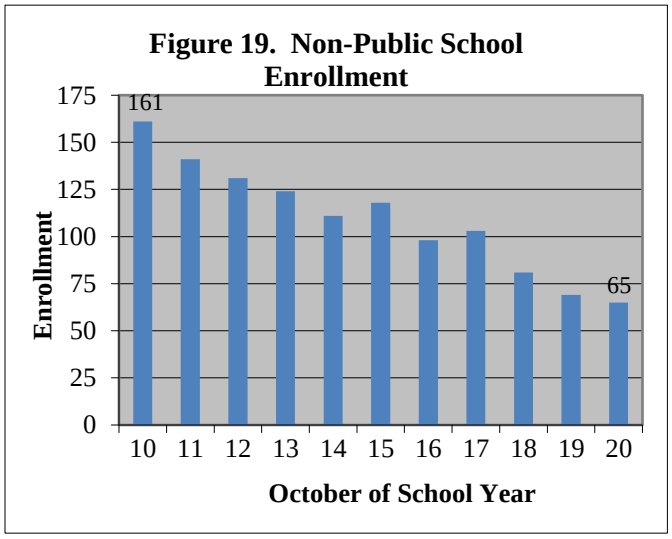


Figure 20 presents the enrollment of Colchester residents in other public schools in Connecticut from 2011 to 2021. The 2021 data are preliminary. The number educated out-of-district rose from 93 in 2011 to 198 in 2016 and then fell to 127 in 2021. The number enrolled in magnet or charter schools rose from 30 students in 2011 to 118 in 2016 and then fell to 48 in 2021. In 2021, 48 students attended a magnet or charter school, 14 attended the agriculture science program at Lyman Memorial High, 51 attended a State Technical High School, and 14 attended a special education program run by a RESC or another public-school district.

**Figure 20. Residents Enrolled in Other Public Schools**

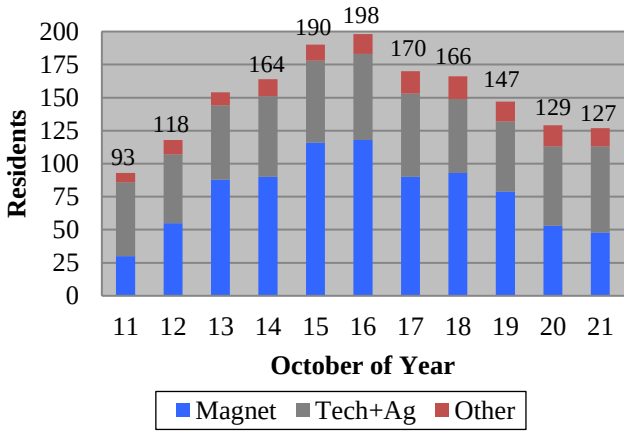



Figure 21 presents the number of Norwich residents who attended Bacon Academy on a tuition basis. The option started with eight students enrolled in 2016. The number grew to 31 in 2021. These students represented 4.4 percent of the Bacon Academy enrollment in 2021. The projection assumes nine Norwich residents will enroll in Colchester grade 9 annually. Over the next ten years, these tuition students from Norwich are projected to average 5.3 percent of Bacon Academy enrollment.

**Figure 21. Tuition Students Attending Bacon Academy**

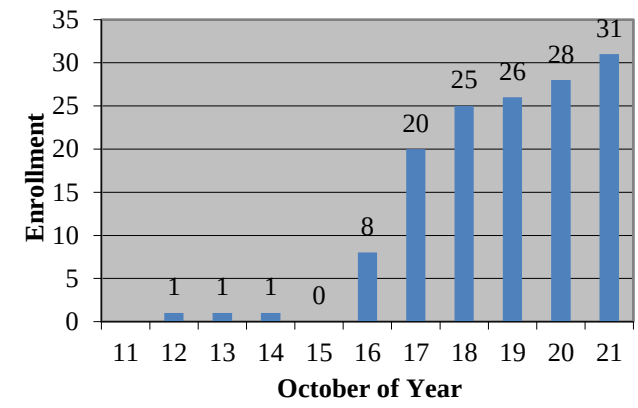
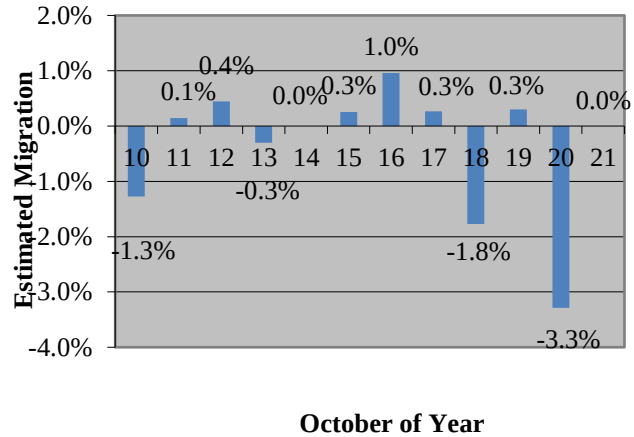



Figure 22 presents the estimated migration of students from Colchester. The rate is adjusted for Colchester residents attending other public schools and non-residents in Colchester schools. In 2020 and 2021, the rate accounted for students home-schooled. The figures do not take into account students attending non-public schools. Estimated migration ranged from a low of -3.3 percent in 2020 to a high of +1.0 percent in 2016. The 2021 rate was zero. The data behind these figures may be found in Appendices A and B. In the 2017-2019 and 2021 look-back period of the projection, there was an average migration of -0.30 percent. The median over the past 25 years was +0.24 percent.

**Figure 22. Estimated Student Migration**

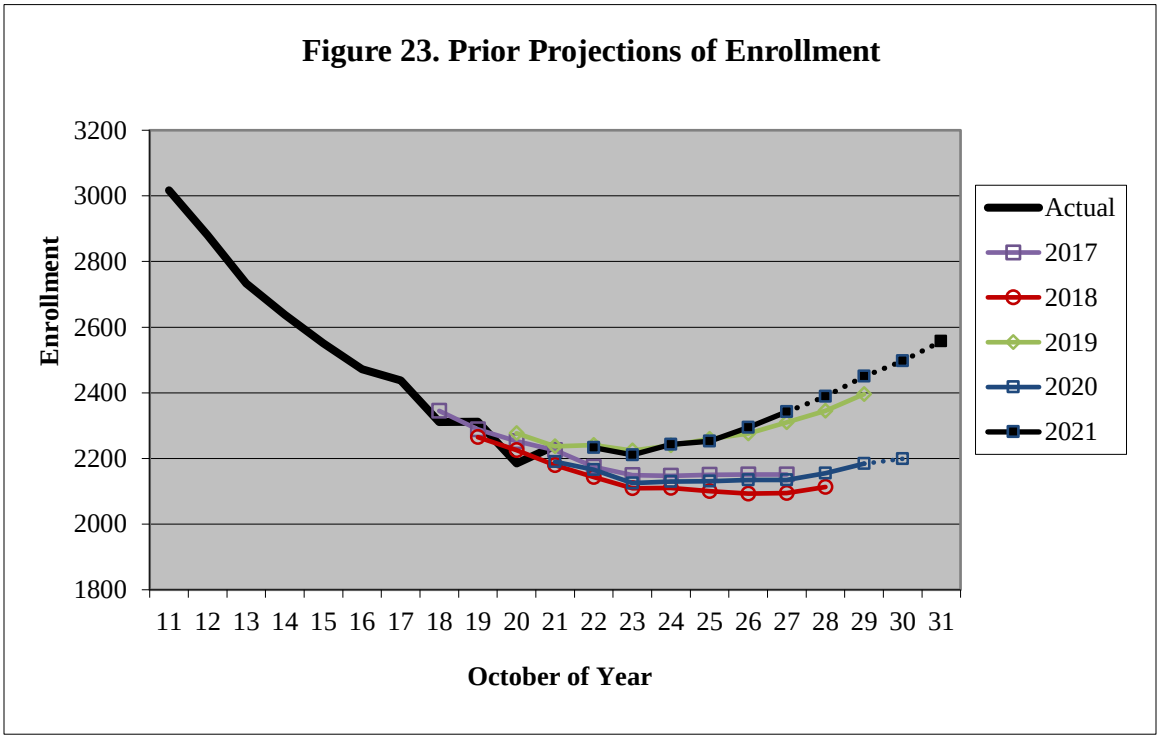


## Prior Projections of Enrollment

The cohort-survival projection method works by moving forward the pattern of recent events that are subsumed within the grade-by-grade enrollment. This works very well when communities are stable. One way to know if that assumption is valid is to examine how past projections have fared. Figure 24 presents the enrollment projections that I have run for Colchester since 2017. Last year's projection under-estimated 2021 enrollment by 49 students or 2.2 percent. The three enrollment projections that I did between 2011 and 2019 had one-year error rates that averaged 2.6 percent. The one projection done between 2011 and 2016 had a five-year error rate of 5.9 percent, which is 1.2 percent annualized.

Last year's projection is running 2.2 percent low. In that analysis, I projected that K-2 enrollment would be 571 students in 2021. The actual enrollment of 606 was 35 students more than projected. The projection was low by 5.8 percent. I projected that enrollment in grades 3-5 would be 432 students in 2021. The actual enrollment of 441 was nine students more than projected. The projection was low by 2.0 percent. I projected that this year's enrollment at William J. Johnson Middle School would be 485 students. The actual enrollment of 487 was two students more than projected. The projection was low by 0.4 percent. I projected that this fall's high school enrollment would be 702 students. The actual enrollment of 705 was three students more than projected. The projection was low by 0.4 percent. The 2020 projection expected a pre-kindergarten enrollment of 95 children. There were 99 enrolled in 2021. The rebound from Covid-19 affected 2021 enrollment disproportionately impacted younger students. This is similar to what I have observed so far this year in other districts.

**Figure 23. Prior Projections of Enrollment**




Over the past forty years, I have found the cohort-survival method provides estimates that are sufficiently accurate for intermediate-range policy planning. The eight-year planning horizon for school construction grants is at the limit of the useful accuracy of the method. The method usually does not attempt to predict the future. Its key assumption is that the near future will be like the recent past. For example, projections done in the late 2000s did not anticipate the recession of 2011. Some policy changes such as kindergarten retention, drop-out prevention programs and the number of credits to be considered a 10$^{th}$ grader can be built into a new projection. It is incumbent upon the receiver of a projection to identify planned changes so that they can be built into a projection.

## Summary

I project that total enrollment in 2031 could grow by more than 300 students, an increase of more than 14 percent over 2021. That would bring total enrollment to about 2,560 students. I project that Colchester Elementary School enrollment could move upward from 606 students in 2021 to about 710 students in 2031. This would be about a 105-student gain, a growth of over 17 percent. I expect the Jack Jackter School enrollment could increase from 441 students in 2021 to about 610 students in 2031. I believe that future enrollment at the William J. Johnson Middle School could decline to about 450 students somewhere between 2024 and 2026 and be close to 555 students in 2031. That would be a 13-14 percent increase over 2021. The peak enrollment at Bacon Academy was 1,003 students in 2009. Between 2021 and 2028, enrollment at the Academy could fall from 705 students to about 565 students. By 2031, I anticipate it will be close to 680 students. That would represent a net loss of about 25 students, a decline of over three percent.

This report is projecting an increase in enrollment in grades K-8 and a slight decline in high school enrollments. It is critical to remember that a projection is just a moving forward of recent trends. Is the forecast realistic? In the five years from 2011 to 2015 (this fall's kindergarten through 4th graders) births averaged 130. Births in the 2016 through 2021 period will average close to 147. My model assumes that births in 2021 to 2025 will average 146. I used a 7.5 percent growth between birth and eventual kindergarten enrollment. The median over the past 15 years was 4.2 percent. (That included years when full-day kindergarten was not offered.) The average of the grade-to grade growth rates across grades 2-12 that I used to grow future enrollment was 0.989. That is about the same as last year. These projection multipliers averaged a Covid-19 depressed 0.965 in 2021; the median over the last 20 years was 0.995. Taking these three key factors into consideration, I believe the projection is realistic.

These projections are based upon several other assumptions revolving around the notion that the recent past is a good predictor of the near future. The projection assumes that the following school policies will continue: kindergarten will remain full-day; 11 percent of parents will delay their child's kindergarten entry until age 6; nine Norwich children will enroll in grade 9 annually, retention policies will not change; no expansion of enrollment in area magnets and no change in the dropout rate. The projection assumes a student migration of -0.06 percent; a very slight decline in non-public school enrollment; 19 new housing units will be constructed annually; an average of 190 sales of existing single-family homes and condominiums and a slight increase in the labor force.

Obviously Covid-19 has introduced uncertainty into this projection. I assumed that the epidemic would be substantially behind us by October of 2021. I assumed that the pattern of growth observed between 2016 and 2019 would return. I further assumed that the increase in students home-schooled would return over the next two years. I further assumed that the job insecurity introduced by Covid-19 would depress births in 2021 and 2022. Those are a lot more assumptions than my typical projection. You also appear to have recently changed the number of credits required to move from grade 9 to 10. This is not built into the high school's projection. I expect that grade 9 will be have slightly higher enrollment than projected and grade 10 slightly lower. A bit more caution than usual must be exercised when using these projections to make policy decisions.

It is important to remember that the cohort survival method relies on observed data from the recent past. Its key assumption is that those conditions will persist. It does not try to predict when the economic conditions might change. We cannot know today how long these conditions will continue. This projection should be used as a starting point for local planning. Examine the factors and assumptions underlying the method. You know your community best. Apply your knowledge of the specific conditions in Colchester and then make adjustments as necessary.

## Appendix A. Colchester Enrollment Projected by Grade to 2031: Primary and Intermediate Grades

| School Year | Birth Year | Births[1] | K | 1 | 2 | 3 | 4 | 5 | PK | Total PK-2 | Total 3-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2011-11** | 2005 | 190 | 202 | 228 | 207 | 214 | 233 | 241 | 61 | 698 | 688 |
| **2011-12** | 2006 | 169 | 180 | 197 | 223 | 204 | 214 | 236 | 80 | 680 | 654 |
| **2012-13** | 2007 | 147 | 170 | 171 | 195 | 222 | 198 | 210 | 76 | 612 | 630 |
| **2013-14** | 2008 | 144 | 158 | 164 | 170 | 196 | 220 | 198 | 59 | 551 | 614 |
| **2014-15** | 2009 | 164 | 162 | 161 | 160 | 168 | 200 | 217 | 59 | 542 | 585 |
| **2015-16** | 2011 | 151 | 147 | 171 | 161 | 163 | 165 | 203 | 91 | 570 | 531 |
| **2016-17** | 2011 | 139 | 138 | 141 | 171 | 170 | 162 | 166 | 53 | 503 | 498 |
| **2017-18** | 2012 | 140 | 155 | 144 | 152 | 174 | 170 | 169 | 92 | 543 | 513 |
| **2018-19** | 2013 | 111 | 127 | 160 | 149 | 151 | 161 | 170 | 97 | 533 | 482 |
| **2019-20** | 2014 | 133 | 158 | 128 | 165 | 142 | 154 | 160 | 104 | 555 | 456 |
| **2021-21** | 2015 | 127 | 147 | 143 | 130 | 159 | 139 | 145 | 86 | 506 | 443 |
| **Projected** | | | | | | | | | | | |
| **2021-22[2]** | 2016 | 161 | 174 | 151 | 151 | 134 | 156 | 142 | 95 | 571 | 432 |
| **2022-23[2]** | 2017 | 144 | 162 | 176 | 157 | 154 | 133 | 158 | 100 | 595 | 445 |
| **2023-24** | 2018 | 135 | 151 | 164 | 182 | 158 | 151 | 134 | 100 | 597 | 443 |
| **2024-25** | 2019 | 159 | 173 | 153 | 170 | 183 | 155 | 153 | 95 | 591 | 491 |
| **2025-26** | 2021 | 138 | 156 | 175 | 158 | 171 | 180 | 157 | 97 | 586 | 508 |
| **2026-27** | 2021 | 142 | 157 | 158 | 181 | 159 | 168 | 182 | 99 | 595 | 509 |
| **2027-28** | 2022 | 145 | 160 | 159 | 163 | 182 | 156 | 170 | 100 | 582 | 508 |
| **2028-29** | 2023 | 146 | 162 | 162 | 164 | 164 | 179 | 158 | 101 | 589 | 501 |
| **2029-30** | 2024 | 149 | 165 | 164 | 168 | 165 | 161 | 181 | 101 | 598 | 507 |
| **2031-31** | 2025 | 150 | 166 | 167 | 170 | 169 | 162 | 163 | 101 | 604 | 494 |
| **Projection Growth Rates[3]** | | | | 1.011 | 1.034 | 1.006 | 0.983 | 1.011 | 0.661 | | |
| **Annual Resident Growth Rates** | | | | | | | | | | | |
| | | | | | | | | | | | **Migration[4]** |
| **2011** | | | 1.065 | 0.975 | 0.978 | 0.986 | 1.000 | 1.013 | 0.550 | | 0.15% |
| **2012** | | | 1.156 | 0.950 | 0.990 | 0.996 | 0.971 | 0.981 | 0.494 | | 0.45% |
| **2013** | | | 1.097 | 0.965 | 0.994 | 1.005 | 0.991 | 1.000 | 0.375 | | -0.30% |
| **2014** | | | 0.988 | 1.019 | 0.976 | 0.988 | 1.020 | 0.986 | 0.407 | | 0.00% |
| **2015** | | | 0.974 | 1.056 | 1.000 | 1.019 | 0.982 | 1.015 | 0.652 | | 0.26% |
| **2016** | | | 0.993 | 0.959 | 1.000 | 1.056 | 0.994 | 1.006 | 0.422 | | 0.96% |
| **2017** | | | 1.107 | 1.043 | 1.078 | 1.018 | 1.000 | 1.043 | 0.754 | | 0.27% |
| **2018** | | | 1.144 | 1.032 | 1.035 | 0.993 | 0.925 | 1.000 | 0.746 | | -1.77% |
| **2019** | | | 1.188 | 1.008 | 1.031 | 0.953 | 1.020 | 0.994 | 0.722 | | 0.30% |
| **2021** | | | 1.157 | 0.905 | 1.016 | 0.964 | 0.979 | 0.942 | 0.564 | | -3.19% |
| **3-Year Ave.** | | | 1.163 | 0.982 | 1.027 | 0.970 | 0.975 | 0.978 | 0.677 | | |
| **Weighted 3-Year** | | | 1.165 | 0.961 | 1.024 | 0.965 | 0.984 | 0.969 | 0.647 | | |
| **5-Year Ave.** | | | 1.118 | 0.990 | 1.032 | 0.997 | 0.984 | 0.997 | 0.642 | | |
| **Weighted-5 year** | | | 1.145 | 0.980 | 1.031 | 0.980 | 0.983 | 0.985 | 0.659 | | |
| **2016-2019** | | | 1.105 | **1.011** | **1.034** | **1.006** | **0.983** | **1.011** | **0.661** | | |

[1] 2005-2019 births are from the State Department of Public Health. The 2018 and 2019 counts are provisional. The 2021 births were based on in-state births through September. Births in 2021-2025 were based on Connecticut State Data Center's 2017 projection of Colchester women of child-bearing ages and my estimate of 2018 fertility rates in Colchester.

[2] Enrollment in 2021 and 2022 assumes half of home-schooled students will return in 2021 and half of those remaining will return in 2022.

[3] Growth rates based on grade-to-grade rates between 2016 and 2019. Kindergarten based on four-year averages (2016-2019) of estimated yield from births five- and six-years ago and retention.

[4] Estimated by comparing the enrollment in grades 3-8 one year with the enrollment in grades 2-7 the prior year with an adjustment for residents out and non-residents in.

## Appendix B. Colchester Enrollment Projected by Grade to 2031: Middle and High School Grades

| School Year | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 6-8 Total | 9-12 Total | District Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **2011-11** | 220 | 241 | 244 | 245 | 250 | 239 | 253 | 705 | 987 | 3,078 |
| **2011-12** | 234 | 224 | 242 | 228 | 247 | 249 | 259 | 700 | 983 | 3,017 |
| **2012-13** | 229 | 245 | 227 | 205 | 221 | 248 | 263 | 701 | 937 | 2,880 |
| **2013-14** | 197 | 230 | 241 | 205 | 208 | 224 | 263 | 668 | 900 | 2,733 |
| **2014-15** | 198 | 195 | 232 | 226 | 210 | 213 | 237 | 625 | 886 | 2,638 |
| **2015-16** | 213 | 198 | 189 | 202 | 219 | 204 | 225 | 600 | 850 | 2,551 |
| **2016-17** | 188 | 216 | 201 | 187 | 199 | 220 | 214 | 605 | 820 | 2,426 |
| **2017-18** | 165 | 193 | 213 | 203 | 185 | 197 | 226 | 571 | 811 | 2,438 |
| **2018-19** | 167 | 164 | 189 | 197 | 209 | 174 | 196 | 520 | 776 | 2,311 |
| **2019-20** | 174 | 170 | 173 | 207 | 194 | 196 | 187 | 517 | 784 | 2,312 |
| **2021-21** | 165 | 170 | 169 | 175 | 197 | 184 | 187 | 504 | 743 | 2,196 |
| **Projected** | | | | | | | | | | |
| **2021-22**[3] | 144 | 168 | 173 | 165 | 169 | 184 | 184 | 485 | 702 | 2,190 |
| **2022-23**[3] | 140 | 147 | 170 | 168 | 159 | 158 | 184 | 457 | 669 | 2,166 |
| **2023-24** | 155 | 142 | 148 | 173 | 161 | 149 | 157 | 445 | 640 | 2,125 |
| **2024-25** | 131 | 157 | 143 | 152 | 166 | 150 | 149 | 431 | 617 | 2,130 |
| **2025-26** | 150 | 133 | 158 | 147 | 146 | 154 | 149 | 441 | 596 | 2,131 |
| **2026-27** | 154 | 152 | 134 | 161 | 141 | 136 | 153 | 440 | 591 | 2,135 |
| **2027-28** | 178 | 156 | 153 | 138 | 154 | 131 | 135 | 487 | 558 | 2,135 |
| **2028-29** | 167 | 180 | 157 | 156 | 132 | 143 | 130 | 504 | 561 | 2,155 |
| **2029-30** | 155 | 169 | 181 | 160 | 149 | 123 | 142 | 505 | 574 | 2,184 |
| **2031-31** | 177 | 157 | 170 | 183 | 153 | 139 | 122 | 504 | 597 | 2,199 |
| **Projection Growth Rates** | 0.980 | 1.014 | 1.006 | 0.963 | 0.955 | 0.927 | 0.995 | | | |
| **Annual Growth Rates**[1] | | | | | | | | | | **Estimated Migration**[2] |
| **2011** | 0.971 | 1.018 | 1.004 | *0.934* | *1.008* | *0.996* | *1.084* | | | 0.15% |
| **2012** | 0.970 | 1.047 | 1.013 | *0.847* | *0.969* | *1.004* | *1.056* | | | 0.45% |
| **2013** | 0.938 | 1.004 | 0.984 | *0.903* | *1.015* | *1.014* | *1.060* | | | -0.30% |
| **2014** | 1.000 | 0.990 | 1.009 | *0.938* | *1.024* | *1.024* | *1.058* | | | 0.00% |
| **2015** | 0.982 | 1.000 | 0.969 | *0.871* | *0.969* | *0.971* | *1.056* | | | 0.26% |
| **2016** | 0.926 | 1.014 | 1.015 | *0.952* | *0.950* | *0.973* | *1.015* | | | 0.96% |
| **2017** | 0.994 | 1.027 | 0.986 | *0.950* | *0.925* | *0.930* | *0.973* | | | 0.27% |
| **2018** | 0.988 | 0.994 | 0.979 | *0.887* | *0.990* | *0.897* | *0.954* | | | -1.77% |
| **2019** | 1.024 | 1.018 | 1.055 | *1.063* | *0.954* | *0.909* | *1.040* | | | 0.30% |
| **2021** | 1.031 | 0.977 | 0.994 | *0.971* | *0.917* | *0.912* | *0.918* | | | -3.19% |
| **3-Year Average** | 1.014 | 0.996 | 1.009 | 0.974 | 0.954 | 0.906 | 0.971 | | | |
| **Weighted 3-Yr** | 1.021 | 0.993 | 1.012 | 0.988 | 0.942 | 0.909 | 0.965 | | | |
| **5-Year Average** | 0.993 | 1.006 | 1.006 | 0.965 | 0.948 | 0.924 | 0.980 | | | |
| **Weighted 5-Yr** | 1.009 | 1.000 | 1.008 | 0.975 | 0.945 | 0.915 | 0.972 | | | |
| **2016-2019** | **0.980** | **1.014** | **1.006** | **0.963** | **0.955** | **0.927** | **0.995** | | | |

[1] Annual growth rates in grades 9-12 adjusted for tuition students from Norwich. The projection assumes 9 Norwich residents will enroll in grade 9 annually.

[2] Estimated by comparing the enrollment in grades 3-8 one year with the enrollment in grades 2-7 the prior year with adjustments for residents out and non-residents in.

Grade 9 enrollments based upon three-year averages of the annual resident growth rates plus 9 students from

Norwich in grade 9 in 2021 and 10 in 2021-29.